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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,644	12/29/2003	Alpaslan Demir	I-2-0543.1US	5746

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EXAMINER	
ZHENG, EVA Y	
ART UNIT	**PAPER NUMBER**
2611	

DATE MAILED: 11/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/747,644	DEMIR ET AL.	
	Examiner	Art Unit	
	Eva Yi Zheng	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,12,13,24,25 and 36* is/are rejected.

7)☒ Claim(s) *2-11,14-23 and 26-35* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1, 13 and 25 are objected to because of the following informalities:

a) on line 1, please change "the frequency" to – a frequency --.

b) on line 2, please change "the real" to – a real --.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 13, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of Hammes et al (US 2003/0215028).

a) Regarding to claims 1, 13 and 25, AAPA disclose a digital baseband (DBB) receiver for adjusting the frequency domain response of at least one of the real and imaginary signal components of a wireless communication signal, the DBB receiver comprising:

(a) a demodulator having real and imaginary signal outputs, the demodulator for receiving the communication signal and outputting real and imaginary signal components of the communication signal on the real and imaginary signal outputs (145 in Fig. 1);

(b) at least one analog real signal path high pass filter (HPF) in communication with the real signal output of the demodulator and the real signal path of the digital HPFC module (175A in Fig. 1); and

(c) at least one analog imaginary signal path HPF in communication with the imaginary signal output of the demodulator and the imaginary signal path of the digital HPFC module (175B in Fig. 1).

AAPA disclose all the subject matters above except for the specific teaching of a digital high pass filter compensation (HPFC) module having real and imaginary signal paths.

However, Hammes et al, in the same field of endeavor, disclose a receiver system comprises an analog signal processing section coupled with a digital signal processing section (Fig.1), wherein the digital filters AP1 and AP2 are used for group delay distortion compensation that is caused by analog filters ([0033]). Therefore, it is obvious to one of ordinary skill in art to combine the teaching of an conventional analog receiver taught by AAPA with the digital filter taught by Hammes et al to compensate group delay distortion. By doing so, provide power efficiency, reduce error rate and improve sensitivity in a receiver.

4. Claims 12, 24, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of Hammes et al (US 2003/0215028), in further view of Vepsalainen et al (US 2004/0176055).

Regarding to claims 12, 24 and 36, AAPA and Hammes et al disclose all the subject matters above except for the specific teaching of the digital HPFC module is selectively enabled or disabled.

However, Vepsalainen et al, in the same field of endeavor, disclose a radio receiver comprise a control circuit (26 in Fig. 3) coupled to digital HPF for DC level change adaptation ([0023-0024]). Therefore, it is obvious to one of ordinary skill in art to implement the control or switching circuit in a receiver as taught by Vepsalainen et al in the system of AAPA and Hammes et al. By doing so, compensate DC offset in a receiver system.

5. Claims 1,13, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hammes et al (US 2003/0215028) in view of Imai et al (US 6,549,763).

a) Regarding to claims 1, 13 and 25, Hammes et al disclose a digital baseband (DBB) receiver for adjusting the frequency domain response of at least one of the real and imaginary signal components of a wireless communication signal, the DBB receiver comprising:

(a) a demodulator having real and imaginary signal outputs, the demodulator for receiving the communication signal and outputting real and imaginary signal components of the communication signal on the real and imaginary signal outputs (M1 and M2 in Fig. 1);

(b) a digital high pass filter compensation (HPFC) module having real and imaginary signal paths (AP1 and AP2 in Fig. 1); wherein the digital HPFC module

suppresses group delay variation distortion caused by at least one of the analog real and imaginary HPFs ([0033]).

Hammes et al also disclose at least one analog real signal path filter in communication with the real signal output of the demodulator and the real signal path of the digital HPFC module (A1 in Fig. 1); and at least one analog imaginary signal path in communication with the imaginary signal output of the demodulator and the imaginary signal path of the digital HPFC module (A2; KSF (channel selection filter in Fig. 1), but did not specify that a KSF is a high pass filter (HPF).

However, Imai et al, disclose a receiving system comprise a channel selection filter (41 in Fig. 3), wherein the filter could be changed to HPF in responses to the signal input (Col 5, L57-60). Therefore, it is obvious to one of ordinary skill in art to recognize that KSF taught by Hammes et al would utilize HPF in responses to system's need. Therefore, filter out unwanted signals and provide desirable output.

6. Claims 12, 24, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hammes et al (US 2003/0215028) in view of Imai et al (US 6,549,763), in further view of Vepsalainen et al (US 2004/0176055).

Regarding to claims 12, 24 and 36, Hammes et al and Imai et al disclose all the subject matters above except for the specific teaching of the digital HPFC module is selectively enabled or disabled.

However, Vepsalainen et al, in the same field of endeavor, disclose a radio receiver comprise a control circuit (26 in Fig. 3) coupled to digital HPF for DC level change adaptation ([0023-0024]). Therefore, it is obvious to one of ordinary skill in art to implement the control or switching circuit in a receiver as taught by Vepsalainen et al in the system of Hammes et al and Imai et al. By doing so, compensate DC offset in a receiver system.

Allowable Subject Matter

7. Claims 2-11, 14-23, and 26-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eva Y Zheng whose telephone number is 571-272-3049. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh Fan can be reached on 571-272-3042. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Eva Yi Zheng
Examiner
Art Unit 2611

November 14, 2006

CHIEH M. FAN
SUPERVISORY PATENT EXAMINER